
A SHORT NOTE ON SOME BIOLOGICAL CHARACTERISTICS OF THE EUROPEAN RABBIT (*Oryctolagus cuniculus*) IN THE NORTHERN TERRITORY

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Introduction

Between August 1980 and July 1983 the European Rabbit, *Oryctolagus cuniculus*, was the subject of a study to investigate its distribution and biology, and to find useful methods for its control within the Northern Territory. The major findings are reported on elsewhere (Low and Strong 1984 a, b, c, and d; Low, Cooke and Strong 1984; Low, Strong and Williams 1984; Low, Foran and Strong 1984).

In this short note we report on coat colour, sex ratio, age, specific weight and comment on other aspects that become of interest from time to time.

Coat Colour

In the collected samples of just over 2400 Rabbits up to eleven colour variations were represented. These have been grouped into six major types (Table 1). Other colour variations were sighted but they are not included here.

Agouti is the coat colour of the 'normal' wild Rabbit and is described by Stodard (1965a).

Our findings show slightly more yellow Rabbits than is normal for more temperate areas but this does not present any divergence from that which could have been expected for a more arid area. Stodard (1965a) reported that '...coat colour is lighter where rainfall is low and variable, the range of temperature is great and the extremes of temperature high. The coat is blacker where rainfall is greater and more reliable, the range of temperature smaller and the extremes of the temperature colder.'

We found no significant trends within the Northern Territory from east to west or from north to south, for coat colour.

Sex Ratio

The sex ratio of the sample was 0.75:1 (male:female). This closely follows the results of other workers (Dunsmore 1974; Parer 1977; Wood 1980; Shepherd, Edmonds and Nolan 1981). However, Dunsmore (1971) reported a sex ratio strongly favouring males at Mogo on the south coast of New South Wales while stating later that the dominance of females '...approximates what we believe to be usual in Australia'. The number of males and females for each age class is shown in Figure 1.

Shepherd, Edmonds and Nolan (1981) stated: 'Collections of Rabbits, which usually include a small percentage of the population and which are restricted to comparatively short periods of the day, may be particularly susceptible to sampling errors related to differences in behaviour between the sexes'. Over the three year period our samples were collected from various periods during the day and night, from all seasons and from all age classes. Thus most variations would be accounted for.

We found no significant difference in sex ratio in the Northern Territory between seasons. However, there was a significant difference ($P < 0.01$) in winter between the N.W. region (1.26:1) and the S.E. region (0.64:1). There was also a significant

difference in summer between the S.E. and the S.W. but a small sample size precludes a definite statement.

Age specific weight

Data for calculating age specific weight was available for 2314 Rabbits. Rabbits grew rapidly up until aged between six and seven months when they reach 1200 g (Figure 1). All weights are paunched weights, i.e. the stomach, intestines and liver (and embryos in the case of females) were removed before weighing to account for any difference by ingested food, etc. Age is calculated from dried eye lens weight using the formula of Dudzinski and Mykutowycz (1961).

Males were generally heavier than females but the difference is not significant (Figure 1 and Table 2). No significant differences in weight were found in adult Rabbits from different regions of the Northern Territory (Table 2). (For comparison we divided the major area of Rabbit occupation into five regions — NW, NE Central, SW and SE, the central region being Alice Springs and the MacDonnell Ranges.) Casperson (1968) found very significant differences among four sites varying widely from semi-arid through sub-alpine and sub-tropical to a modified Mediterranean type. The lack of variation in the Northern Territory (semi-arid to arid) was probably due to the overall similarity of seasonal conditions experienced during the study.

Other physical features

- i) Eye colour: The vast majority of Rabbits had brown eyes, however, one Rabbit had blue eyes, another had a partly blue eye and there was one albino with pink eyes. All three Rabbits came from the north-west region.
- ii) Moulting: From time to time Rabbits are observed with much fur missing from their tails, legs and underneath in general. This is not to be confused with symptoms of myxomatosis but is a natural process of moulting and is reported on in detail by Stodart (1965b). It can also be caused by Rabbits plucking themselves to remove grass seeds and burrs (B. D. Cooke, pers. comm., 1982) and female Rabbits pluck fur to provide nesting material.

Conclusion

With regard to the physical features reported on here, the Northern Territory Rabbit population did not vary between major regions, and was similar to populations elsewhere in Australia.

Acknowledgements

The work was done while contract to the Conservation Commission of the Northern Territory, supported by funds provided the Feral Animals Committee.

Vanessa Low is thanked for modifying computer programs to process the data.

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Table 1: PERCENTAGE OCCURRENCE OF COAT COLOURS IN RABBITS SAMPLES IN THE NORTHERN TERRITORY

Colour	Percentage Occurrence
Agouti	94.7
Yellow	4.3
Dutch Collar	0.3
Silver-grey	0.3
Black	0.1
Other*	0.3
100.00	

* Includes Rabbits with various white blazes and patches, one albino and one himalayan.

Table 2: MEAN WEIGHT (\pm STANDARD DEVIATION) (g) OF MALE AND FEMALE RABBITS 12 MONTHS AND OLDER FROM 5 REGIONS AND THE WHOLE OF THE NORTHERN TERRITORY

	NW	NE	Central	SE	SW	NT
Males	1435 \pm 100	1444 \pm 139	1448 \pm 142	1437 \pm 134	1376 \pm 142	1429 \pm 137
N	77	139	142	57	108	521
Females	1414 \pm 121	1433 \pm 164	1408 \pm 148	1372 \pm 140	1332 \pm 148	1395 \pm 153
N	73	172	154	78	134	611

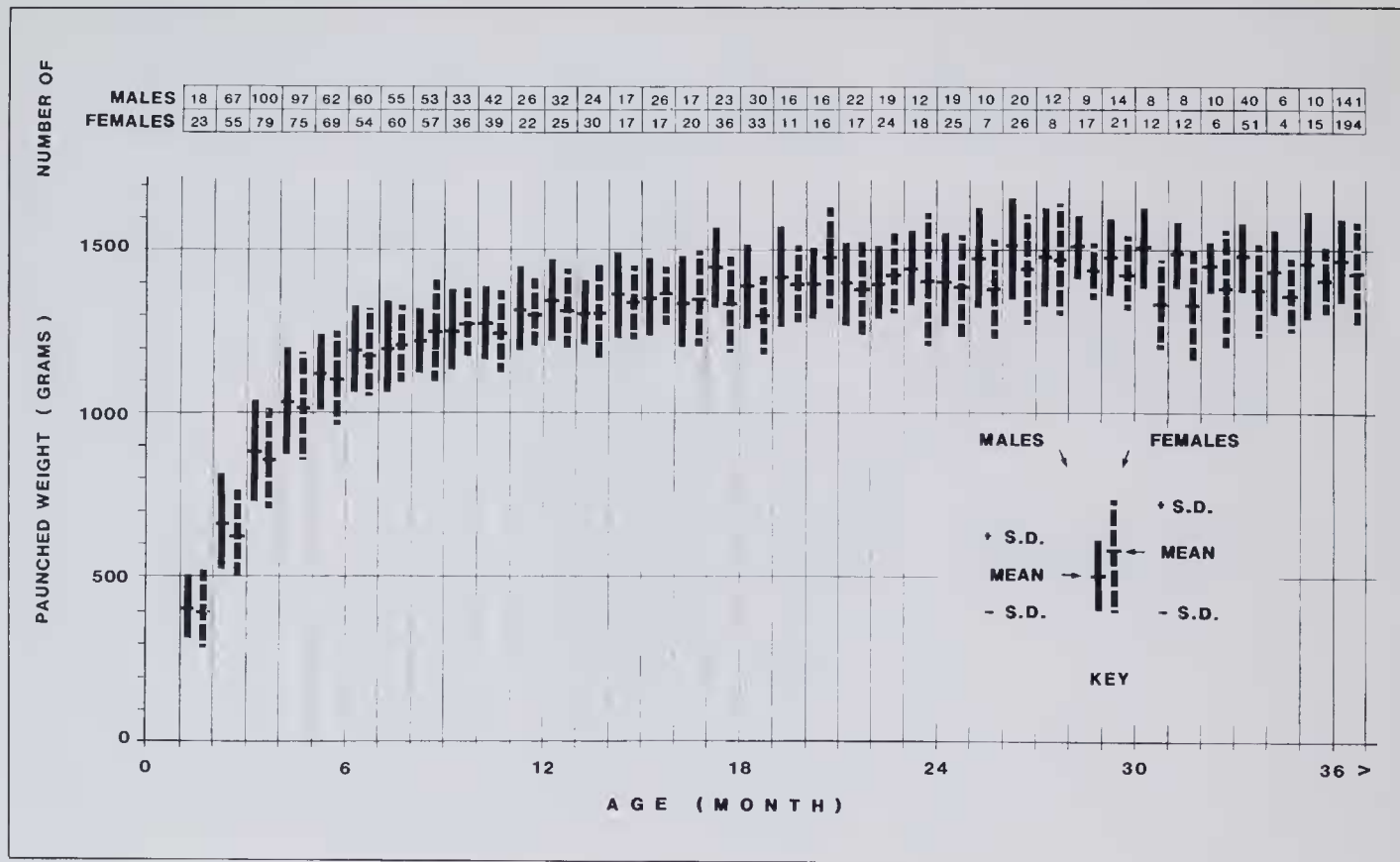


Figure 1: Mean (\pm S.D.) age specific weight of male and female Rabbits in the Northern Territory.